

Notice of Allowability

Application No.

09/890,356

Examiner

Qutub Ghulamali

Applicant(s)

MIYOSHI, KENICHI

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/07/2005.
2. ☒ The allowed claim(s) is/are 21-27.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This Office Action is responsive to an After Final Amendment filed by the applicant 09/07/2005.
2. The Office hereby acknowledges the amendments submitted by the applicant(s). The applicant has cancelled claims 13-20, presenting new claims 21-27, overcoming the objections and rejections set forth in the Final Rejection of 9/7/2005.
The prosecution of this application therefore, pertains to new claims 21-27. Claims 21-27, considered allowable.

Allowable Subject Matter

3. Claims 21-27 allowed.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance:

With reference to independent claims 21 and 22, the prior art of record in combination with other claimed limitations, neither teaches nor renders obvious a communication terminal apparatus comprising:
a coherent detector that performs coherent detection on communication channel signals subjected to phase correction by the phase corrector;
a communication quality measurer that measures communication qualities of coherent detection results of the communication channel signals; and

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a selector that selects a coherent detection result that presents high communication quality, wherein:

the phase correction amount calculator calculates a plurality of phase correction amounts corresponding respectively to all phase rotations applied to the plurality of antennas ;

the phase corrector performs the phase correction of the communication channel signals applying the plurality of phase correction amounts respectively; and

the coherent detector performs coherent detection on the communication channel signals corresponding respectively to the plurality of phase correction amounts.

Such limitations, as recited in claims 21 and 22 are neither anticipated nor rendered obvious by the art of record.

Regarding independent claim 23, the prior art of record in combination with other claimed limitations, neither teaches nor renders obvious a communication terminal apparatus comprising:

a phase prediction value calculator that calculates phase prediction values corresponding respectively to all phase rotations that are applicable to the plurality of antennas; and

a second channel estimator that estimates second channel estimation values from the communication channel signals to which the phase rotations are applied, at the plurality of antennas, wherein:

the phase correction amount calculator finds an angle difference between the phase of each second channel estimation value and each phase prediction value, and calculates the phase correction amounts based on the phase prediction value corresponding to the found angle difference whose angle difference is more likely to occur than the other found angle differences.

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Such limitations, as recited in claim 23 is neither anticipated nor rendered obvious by the art of record.

5. As per independent claims 25, 26 and 27, the steps recited as method reflect features of the apparatus claims highlighted above in allowed claims 21, 22 and 23 respectively, and are therefore, allowed.
6. Claim 24 is allowed by virtue of its dependency to independent claim 23, reflected above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG

August 25, 2005.

A handwritten signature in black ink, appearing to read "J. K. Patel", with a stylized flourish at the end.

JAY K. PATEL
SUPERVISORY PATENT EXAMINER

JAY K. PATEL
SUPERVISORY PATENT EXAMINER